

WHAT IS CLAIMED IS:

1. A system for performing engineering design, the system comprising:

a client for receiving first design information from a first source;

a server coupled to said client via a network, said client uploading said first design information to said server;

said server determining whether said first source has authorization to submit said first design information, notifying a second source of said first design information and transmitting said first design information to said second source;

said server storing said design information.

2. The system of claim 1, wherein:

said receiving said first design information includes said server receiving said first design information via a network;

said notifying said second source includes said server notifying said second source via said network; and

said transmitting said first design information includes said server transmitting said first design information via said network.

3. The system of claim 2, wherein said network is the Internet.

4. The system of claim 1, further including said server:

notifying a next source of said first design information; and

transmitting said first design information to said next source.

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5. The system of claim 4, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

determining whether to notify said first source of said next design information;

notifying said first source of said next design information; and

transmitting said next design information to said first source.

6. The system of claim 1, further including said server:

receiving second design information from said second source;

determining whether said second source has authorization to submit said second design information;

notifying said first source of said second design information; and

transmitting said second design information to said first source.

7. The system of claim 6, further including said server:

notifying a next source of said second design information; and

transmitting said second design information to said next source.

8. The system of claim 7, further including said server:

notifying said next source of said first design information; and

transmitting said first design information to said next source.

9. The system of claim 7, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

notifying said second source of said next design information; and

transmitting said next design information to said second source.

10. The system of claim 7, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

notifying said first source of said next design information; and

transmitting said next design information to said first source.

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11. A system for performing engineering design using the Internet, the system comprising:

a client for receiving first design information from a first source;

a server coupled to said client via a network, said client uploading said first design information to said server;

said server determining whether said first source has authorization to submit said first design information, storing said first design information based on said determining whether said first source has authorization, determining whether to notify a second source of said first design information, determining whether said second source has authorization to receive said first design information, notifying said second source of said first design information based on said determining whether to notify said second source, receiving a request from said second source for said first design information and transmitting said first design information to said second source; and

said server storing said design information.

12. The system of claim 11, further including said server:

determining whether to notify a next source of said first design information;

notifying said next source of said first design information based on said determining whether to notify said next source;

receiving a request from said next source for said first design information; and

transmitting said first design information to said next source.

13. The system of claim 12, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said first source of said next design information;

determining whether said first source has authorization to receive said next design information;

notifying said first source of said next design information based on said determining whether to notify said first source;

receiving a request from said first source for said next design information; and

transmitting said next design information to said first source.

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14. The system of claim 11, further including said server:

receiving second design information from said second source;

determining whether said second source has authorization to submit said second design information;

storing said second design information based on said determining whether said second source has authorization to submit said second design information;

determining whether to notify said first source of said second design information;

determining whether said first source has authorization to receive said second design information;

notifying said first source of said second design information based on said determining whether to notify said first source;

receiving a request from said first source for said second design information; and

transmitting said second design information to said first source.

15. The system of claim 14, further including said server:

determining whether to notify a next source of said second design information;

notifying said next source of said second design information based on said determining whether to notify said next source;

receiving a request from said next source for said second design information; and

transmitting said second design information to said next source.

16. The system of claim 15, further including said server:

determining whether to notify said next source of said first design information;

notifying said next source of said first design information based on said determining whether to notify said next source;

receiving a request from said next source for said first design information; and

transmitting said first design information to said next source.

17. The system of claim 15, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said second source of said next design information;

determining whether said second source has authorization to receive said next design information;

notifying said second source of said next design information based on said determining whether to notify said second source;

receiving a request from said second source for said next design information; and

transmitting said next design information to said second source.

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18. The system of claim 15, further including said server:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said first source of said next design information;

determining whether said first source has authorization to receive said next design information;

notifying said first source of said next design information based on said determining whether to notify said first source;

receiving a request from said first source for said next design information; and

transmitting said next design information to said first source.

19. System for performing engineering design using a network, the system comprising:

an network accessible backbone for enabling collaborative engineering design;

wherein said backbone includes a central repository and a knowledge warehouse.

20. The system of claim 19, wherein said network is the Internet.

21. The system of claim 19, wherein said central repository includes digitization tools, processes, resources and data.

22. The system of claim 19, wherein said central repository includes:
- a data manager;
 - a workflow manager for managing processes;
 - a resource allocation tool for managing resources; and
 - a tools integrator for managing tools.
23. The system of claim 22, wherein said data manager includes a computer program for integrating data from heterogeneous sources.
24. The system of claim 22, wherein said data manager includes a central repository for data in an organization.
25. The system of claim 22, wherein said data manager includes pointers to data residing on a computer.
26. The system of claim 22, wherein said workflow manager includes a computer program for executing and enforcing programmed processes.
27. The system of claim 22, wherein said resource allocation tool includes a computer program for optimizing resource allocation in an organization.
28. The system of claim 22, wherein said tool integrator includes a computer program for integrating heterogeneous tools.
29. The system of claim 19, wherein said knowledge warehouse includes data, processes, tools, and resource allocation patterns identified as best practice.
30. The system of claim 22, further including a product data management system.

31. A system for performing engineering design, the system comprising:

client means for receiving first design information from a first source;

server means for determining whether said first source has authorization to submit said first design information, notifying a second source of said first design information and transmitting said first design information to said second source;

said server means storing said design information.

32. A system for performing engineering design using the Internet, the system comprising:

client means for receiving first design information from a first source;

server means for determining whether said first source has authorization to submit said first design information, storing said first design information based on said determining whether said first source has authorization, determining whether to notify a second source of said first design information, determining whether said second source has authorization to receive said first design information, notifying said second source of said first design information based on said determining whether to notify said second source, receiving a request from said second source for said first design information and transmitting said first design information to said second source; and

said server means storing said design information.

33. A system for performing engineering design using a network, the system comprising:

means for a network accessible backbone for enabling collaborative engineering design; and

wherein said means for a network accessible backbone includes a central repository and a knowledge warehouse.

34. A method for performing engineering design, the method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

notifying a second source of said first design information; and

transmitting said first design information to said second source.

35. The method of claim 34, wherein:

said receiving said first design information includes receiving said first design information via a network;

said notifying said second source includes notifying said second source via said network; and

said transmitting said first design information includes transmitting said first design information via said network.

36. The method of claim 35, wherein said network is the Internet.

37. The method of claim 34, further including:

notifying a next source of said first design information; and
transmitting said first design information to said next source.

38. The method of claim 37, further including:

receiving next design information from said next source;
determining whether said next source has authorization to submit said next design information;

determining whether to notify said first source of said next design information;
notifying said first source of said next design information; and
transmitting said next design information to said first source.

39. The method of claim 34, further including:

receiving second design information from said second source;
determining whether said second source has authorization to submit said second design information;

notifying said first source of said second design information; and
transmitting said second design information to said first source.

40. The method of claim 39, further including:

notifying a next source of said second design information; and
transmitting said second design information to said next source.

41. The method of claim 40, further including:

notifying said next source of said first design information; and

transmitting said first design information to said next source.

42. The method of claim 40, further including:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

notifying said second source of said next design information; and

transmitting said next design information to said second source.

43. The method of claim 40, further including:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

notifying said first source of said next design information; and

transmitting said next design information to said first source.

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44. A method for performing engineering design using the Internet, the method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

storing said first design information based on said determining whether said first source has authorization;

determining whether to notify a second source of said first design information;

determining whether said second source has authorization to receive said first design information;

notifying said second source of said first design information based on said determining whether to notify said second source;

receiving a request from said second source for said first design information; and

transmitting said first design information to said second source.

45. The method of claim 44, further including:

determining whether to notify a next source of said first design information;

notifying said next source of said first design information based on said determining whether to notify said next source;

receiving a request from said next source for said first design information; and

transmitting said first design information to said next source.

46. The method of claim 45, further including:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said first source of said next design information;

determining whether said first source has authorization to receive said next design information;

notifying said first source of said next design information based on said determining whether to notify said first source;

receiving a request from said first source for said next design information; and

transmitting said next design information to said first source.

47. The method of claim 44, further including:

receiving second design information from said second source;

determining whether said second source has authorization to submit said second design information;

storing said second design information based on said determining whether said second source has authorization to submit said second design information;

determining whether to notify said first source of said second design information;

determining whether said first source has authorization to receive said second design information;

notifying said first source of said second design information based on said determining whether to notify said first source;

receiving a request from said first source for said second design information; and

transmitting said second design information to said first source.

48. The method of claim 47, further including:

determining whether to notify a next source of said second design information;

notifying said next source of said second design information based on said determining whether to notify said next source;

receiving a request from said next source for said second design information; and

transmitting said second design information to said next source.

49. The method of claim 48, further including:

determining whether to notify said next source of said first design information;

notifying said next source of said first design information based on said determining whether to notify said next source;

receiving a request from said next source for said first design information; and

transmitting said first design information to said next source.

50. The method of claim 48, further including:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said second source of said next design information;

determining whether said second source has authorization to receive said next design information;

notifying said second source of said next design information based on said determining whether to notify said second source;

receiving a request from said second source for said next design information; and

transmitting said next design information to said second source.

51. The method of claim 48, further including:

receiving next design information from said next source;

determining whether said next source has authorization to submit said next design information;

storing said next design information based on said determining whether said next source has authorization;

determining whether to notify said first source of said next design information;

determining whether said first source has authorization to receive said next design information;

notifying said first source of said next design information based on said determining whether to notify said first source;

receiving a request from said first source for said next design information; and

transmitting said next design information to said first source.

52. A method for performing engineering design using a network accessible backbone, a central repository having a data manager, workflow manager, resource allocation tool and tools integrator, and a knowledge warehouse, the method comprising:

said central repository maintaining an instance of each ongoing project in an organization; and

said data manager maintaining pointers to data residing on a computer and presenting said pointers if said data resides on said data manager's computer.

53. The method of claim 52, wherein said network is the Internet.

54. The method of claim 52, further including said data manager integrating data from legacy systems.

55. The method of claim 52, further including said data manager integrating data managed by computer aided design systems.

56. The method of claim 52, further including said data manager integrating data managed by product data management systems.

57. The method of claim 52, further including said workflow manager executing and enforcing a design for six sigma process.

58. The method of claim 52, further including said resource allocation tool accessing a directory of resources.

59. The method of claim 52, further including said tool integrator estimating the performance of a product under operating conditions.

60. The method of claim 52, further including said tool integrator executing simulation and legacy tools.

61. The method of claim 52, further including identifying data, processes, tools and resource allocation patterns as best practice.

62. The method of claim 52, further including restricting access to said network based a security constraint.

63. The method of claim 52, further including monitoring the progress of a product's quality during and after the design process.

64. A storage medium encoded with machine-readable computer program code for performing engineering design, said storage medium including instructions for causing a processor to implement a method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

notifying a second source of said first design information; and

transmitting said first design information to said second source.

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65. A storage medium encoded with machine-readable computer program code for performing engineering design using the Internet, said storage medium including instructions for causing a processor to implement a method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

storing said first design information based on said determining whether said first source has authorization;

determining whether to notify a second source of said first design information;

determining whether said second source has authorization to receive said first design information;

notifying said second source of said first design information based on said determining whether to notify said second source;

receiving a request from said second source for said first design information; and

transmitting said first design information to said second source.

66. A computer data signal for performing engineering design, said computer data signal comprising code conFIG. to cause a processor to implement a method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

notifying a second source of said first design information; and

transmitting said first design information to said second source.

67. The computer data signal of claim 66, wherein said computer data signal is embodied in a carrier wave.

68. The computer data signal of claim 66 wherein said computer data signal is unmodulated.

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69. A computer data signal for performing engineering design using the Internet, said computer data signal including code conFIG.d to cause a processor to implement a method comprising:

receiving first design information from a first source;

determining whether said first source has authorization to submit said first design information;

storing said first design information based on said determining whether said first source has authorization;

determining whether to notify a second source of said first design information;

determining whether said second source has authorization to receive said first design information;

notifying said second source of said first design information based on said determining whether to notify said second source;

receiving a request from said second source for said first design information; and

transmitting said first design information to said second source.

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